

# Models 106-PR-SC / 206-PR-SC Pressure Reducing Valve with Solenoid Shut-Off



106-PR-SC Globe

## KEY FEATURES

- Excellent low flow stability
- Fast-acting solenoid override
- Operates as normally open or closed
- Easily and precisely set downstream pressure

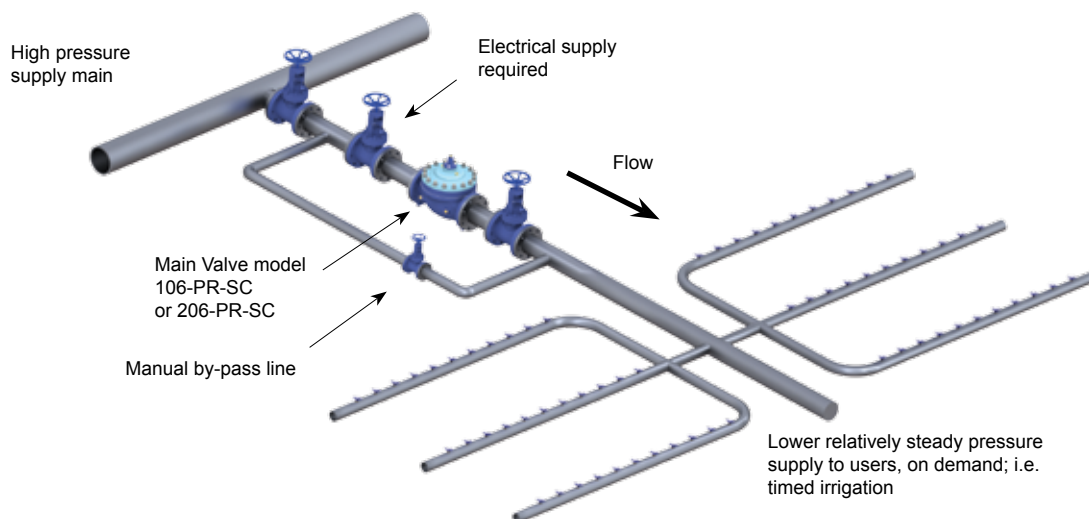
## Product Overview

The 106-PR-SC and 206-PR-SC pressure reducing valves with solenoid shut-off are based on the 106-PG or 206-PG main valve.

The pilot valve senses the downstream pressure through a connection at the valve outlet. Under flowing conditions, the pilot reacts to small changes in pressure to control the valve position by modulating the pressure above the diaphragm. The downstream pressure is maintained relatively steady at the pilot set-point.

The solenoid shut-off / override interrupts the PR function to close off the main valve. The valve is available as either normally open where the solenoid is energized to close the main valve or as normally closed where the solenoid is de-energized to close the main valve.

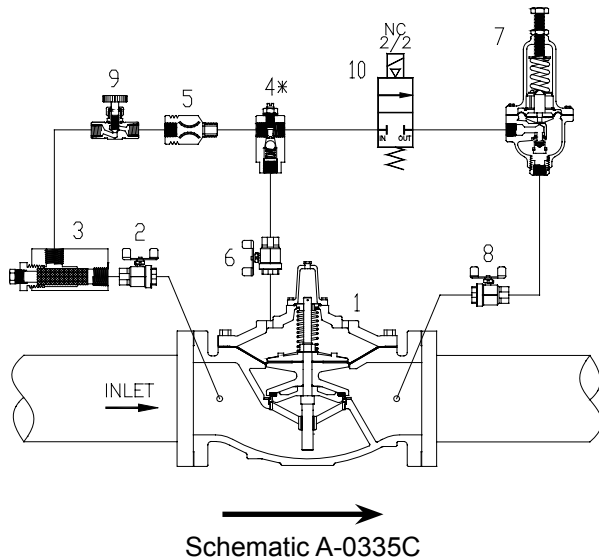
## Typical Application



# Models 106-PR-SC / 206-PR-SC

## Pressure Reducing Valve with Solenoid Shut-Off

### Schematic Drawing



1. Main Valve - 106-PG or 206-PG
2. Isolation Valve - standard 4 in / 100 mm) and larger
3. Strainer - standard 4 in / 100 mm and larger
- 4.\* Model 26 Flow Stabilizer
  - Standard on valves 8 in / 200 mm 106, 10" / 250 mm 206
5. Fixed Restriction
6. Isolation Valve - standard 4 in / 100 mm and larger
7. Model 160 pilot
  - Specify for 5 to 50 psi / 0.35 to 3.5 bar, 10 to 80 psi / 0.70 to 5.5 bar, 20 to 200 psi / 1.3 to 13.8 bar, 100 to 300 psi / 6.9 to 20.7 bar.
8. Isolation Valve - standard all sizes
9. Closing Speed Control - model 852-B
10. Solenoid Valve 2 way

### Standard Materials

Standard materials for pilot system components are:

- ASTM B62 bronze or ASTM B16 brass
- AISI 303/316 stainless steel trim
- Buna-N / EPDM diaphragm and seals

### Specifications

- The valve shall be a Singer Valve model 106-PR-SC / 206-PR-SC, size “\_\_\_\_\_”, ANSI Class 150 (ANSI 300, ANSI flanges drilled to ISO PN 10 / 16 / 25 or 40) pressure rating / flange standard, globe (angle), style valve. The Model 160 Pressure Reducing Pilot (Normally Open Pilot) spring range shall be “\_\_\_ to \_\_\_” psi / “\_\_\_ to \_\_\_” bar, with set-point preset at Singer Valve to “\_\_\_” psi / “\_\_\_” bar Solenoid override shall be two-way normally closed: de-energized to close main valve (normally open: energized to close main valve) with a 120VAC / 60Hz (220 VAC / 50 Hz or 24VDC) solenoid coil. Assembly shall be according to Schematic A-0335C.
- The valve shall maintain relatively accurate control of the downstream pressure regardless of fluctuation in flow or upstream pressure. The solenoid shall allow for remote override capability.
- Refer to Main Valve section, 106-PG or 206-PG for detailed information pertaining to valve sizes and materials, selection criteria and specifications.
- Refer to Pilot and Accessories section, Model 160 Pressure Reducing (Normally Open Pilot) and Model 26 Flow Stabilizer for detailed information pertaining to materials and specifications. Solenoid specification information is available from Singer Valve only at this time.

# Models 106-PR-SC / 206-PR-SC Pressure Reducing Valve with Solenoid Shut-Off

## Selection Summary

1. Select the valve series and size with sufficient capacity.
2. Check the operating flow against valve minimum.
3. If the outlet pressure is less than 35% of the inlet pressure, check for cavitation.
4. Determine whether operation is energized or de-energized to close the main valve.
5. Select the voltage (120VAC standard) for solenoid and advise maximum operating differential pressure.
6. Ensure that the flange rating exceeds the maximum operating pressure.

## Ordering Instructions

Refer to page 293 for the order form and ordering instructions.

Additionally, include the following information for this product:

1. Full port (106) or reduced port (206)
2. Pilot range

106-PR-SC	Flow Capacity (See 106-PG in Main Valve section for other valve data)								
Size (inches)	1/2 in	3/4 in	1 in	1-1/4 in	1-1/2 in	2 in	2-1/2 in	3 in	4 in
Size (mm)	15 mm	19 mm	25 mm	32 mm	40 mm	50 mm	65 mm	80 mm	100 mm
Minimum (USGPM) Flat Diaphragm	1	1	1	1	1	5	5	5	10
Minimum (L/s) Flat Diaphragm	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.3	0.6
Maximum Continuous (USGPM)	12	19	49	93	125	210	300	460	800
Maximum Continuous (L/s)	0.8	1	3	6	8	13	19	29	50

106-PR-SC	Flow Capacity (See 106-PG in Main Valve section for other valve data)								
Size (inches)	6 in	8 in	10 in	12 in	14 in	16 in	20 in	24 in	36 in
Size (mm)	150 mm	200 mm	250 mm	300 mm	350 mm	400 mm	500 mm	600 mm	900 mm
Minimum (USGPM) Flat Diaphragm	20	40	-	-	-	-	-	-	-
Minimum (USGPM) Rolling Diaphragm	1	1	3	3	3	3	10	10	20
Minimum (L/s) Flat Diaphragm	1.3	2.5	-	-	-	-	-	-	-
Minimum (L/s) Rolling Diaphragm	0.1	0.1	0.2	0.2	0.2	0.2	0.6	0.6	1.3
Maximum Continuous (USGPM)	1800	3100	4900	7000	8500	11000	17500	25800	55470
Maximum Continuous (L/s)	114	196	309	442	536	694	1104	1628	3500

206-PR-SC	Flow Capacity (See 206-PG in Main Valve section for other valve data)								
Size (inches)	3 in	4 in	6 in	8 in	10 in	12 in	16 in	18 in	20 in
Size (mm)	80 mm	100 mm	150 mm	200 mm	250 mm	300 mm	400 mm	450 mm	500 mm
Minimum (USGPM) Flat Diaphragm	5	5	10	20	40	-	-	-	-
Minimum (USGPM) Rolling Diaphragm	-	-	-	-	-	3	3	3	3
Minimum (L/s) Flat Diaphragm	0.3	0.3	0.6	1.3	2.5	-	-	-	-
Minimum (L/s) Rolling Diaphragm	-	-	-	-	-	0.19	0.19	0.19	0.19
Maximum Continuous (USGPM)	300	580	1025	2300	4100	6400	9230	16500	16500
Maximum Continuous (L/s)	19	37	65	145	260	404	582	1040	1040

206-PR-SC	Flow Capacity (See 206-PG in Main Valve section for other valve data)						
Size (inches)	24 x 16 in	24 x 20 in	28 in	30 in	32 in	36 in	40 in
Size (mm)	600 x 400 mm	600 x 500 mm	700 mm	750 mm	800 mm	900 mm	1000 mm
Minimum (USGPM) Rolling Diaphragm	3	3	10	10	10	10	20
Minimum (L/s) Rolling Diaphragm	0.2	0.2	0.6	0.6	0.6	0.6	1.3
Maximum Continuous (USGPM)	16500	21700	33600	33650	33700	33800	62000
Maximum Continuous (L/s)	1040	1370	2120	2123	2126	2132	3912